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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/812,629 | 03/29/2004 | Michael E. Miller | 85672AAJA | 3482 |
| 7590 08/09/2007 | | | | |
| Paul A. Leipold Patent Legal Staff Eastman Kodak Company 343 State Street Rochester, NY 14650-2201 | | | | |
| | | | EXAMINER CHANG, KENT WU | |
| | | | ART UNIT 2629 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/812,629 | Applicant(s) MILLER ET AL. | |
| | Examiner Kent Chang | Art Unit 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,5,6,8,22,23 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,7,9-21 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>3/11/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 2, 3, 5, 6, 8, 22, 23, 25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/31/07. Furthermore, claims 2, 3, and 25 are also withdrawn from further consideration pursuant to 37 CFR 1.142(b) since they are drawn to a nonelected Species.

Information Disclosure Statement

2. The references listed in the Information Disclosure Statement submitted 1/19/05 and 3/11/05 have been considered by the examiner (see attached PTO-1449).

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1, 4, 7, 9-21, 24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-49 of U.S. Patent No.

7,230,594. Although the conflicting claims are not identical, they are not patentably distinct from each other because the driver controls the color gamut of the OLEDs based on the control signal as recited in the claims of Patent No. 7,230,594 would also control the color gamut saturation as recited in the claims of the current application since the color gamut saturation of light is determined by the color gamut of the OLEDs.

5. Claims 1, 4, 7, 9-21, 24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-32 of U.S. Patent No.

7,184,067. Although the conflicting claims are not identical, they are not patentably distinct from each other because the driver controls the color gamut of the OLEDs based on the control signal as recited in the claims of Patent No. 7,184,067 would also control the color gamut saturation as recited in the claims of the current application since the color gamut saturation of light is determined by the color gamut of the OLEDs.

6. Claims 1, 4, 7, 9-21, 24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No.

7,075,242. Although the conflicting claims are not identical, they are not patentably distinct from each other because the driver controls the color gamut of the OLEDs based on the control signal as recited in the claims of Patent No. 7,075,242 would also

control the color gamut saturation as recited in the claims of the current application since the color gamut saturation of light is determined by the color gamut of the OLEDs.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 10, it is unclear what are the “**some** minimum and/or maximum value” of the color gamut saturation of the OLED display. Usually, a range could have **only one** minimum and/or maximum value.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 4, 9-11, 14, 15, 21, 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Siwinski (US2002/0186214).

Siwinski teaches an OLED display system, comprising: a) an OLED display including an array of light emitting pixels, each pixel having a plurality of OLEDs

for emitting different colors of light specifying a gamut wherein one of the OLEDs has a power efficiency or lifetime different from the power efficiency or lifetime of at least one of the other OLEDs; b) a control signal; and c) a display driver for receiving a color display signal representing a relative luminance and color to be produced for each pixel of the display and generating a converted color display signal for driving the OLEDs in the display, wherein the display driver is responsive to the control signal for controlling the color gamut saturation of light produced by the OLEDs to reduce power consumption or increase lifetime of at least one of the OLEDs (see ¶0010-0016).

Consider claim 4. The OLED display system of Siwinski, wherein the control signal is dependent upon the image content of the color display signal (see ¶0015-0016).

Consider claim 9. The OLED display system of Siwinski comprises means for generating a control signal is a user interface control that allows a user to select a tradeoff between power usage and color gamut saturation of the OLED display (user manually control the converting, see ¶0018).

Consider claim 10. The OLED display system of Siwinski, wherein the display driver limits the color gamut saturation of the OLED display within a range having a minimum and/or maximum value.

Consider claim 11. The OLED display system of Siwinski, wherein the OLED display includes OLEDs having different emissive materials that emit different colors of light (see ¶0002 and 0009).

Consider claims 14 and 15. The OLED display system of Siwinski, wherein the plurality of OLEDs includes at least one OLED (white) within the gamut defined by the other OLEDs (RGB).

Consider claims 21. The OLED display system of Siwinski, wherein one of the OLEDs (white) has a power efficiency greater than the power efficiency of at least one of the other OLEDs (R, G, B), and the display driver is responsive to the control signal for controlling the color gamut saturation of light produced by the OLEDs to reduce power consumption.

As to claim 24, see rejection above, note that Siwinski also teaches the method of driving the display as stated above.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 7, 12, 13, 16-20 are rejected under 35 U.S.C. 103(a) as being obvious over Siwinski (US2002/0186214).

Consider claim 7. Siwinski teaches an OLED display system, comprising: a) an OLED display including an array of light emitting pixels, each pixel having a plurality of OLEDs for emitting different colors of light specifying a gamut wherein one of the OLEDs has a power efficiency or lifetime different from the power efficiency or lifetime of at least one of the other OLEDs; b) a control signal; and c) a display driver for receiving a color display signal representing a relative luminance and color to be produced for each pixel of the display and generating a converted color display signal for driving the OLEDs in the display, wherein the display driver is responsive to the control signal for controlling the color gamut saturation of light produced by the OLEDs to reduce power consumption or increase lifetime of at least one of the OLEDs (see ¶0010-0016). Although Siwinski does not expressly teach using a damping constant, however, the examiner takes Official Notice that it is well known to change brightness or color of a display gradually (i.e., using a damping constant) so as to prevent rapid changes in color gamut saturation which would have caused user's annoyance. Consider claims 12 and 13. Siwinski teaches RGB color pixels but is silent in using color filter in generating color. However, the examiner takes Official Notice that it is well known to use color filter in generating color. Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to include OLEDs that emit a broad spectrum of light and are overlaid with color

filters in the device of Siwinski so as to generate color light with low cost and simple manufacturing processing .

As to claims 16-20, Siwinski teaches using a white subpixel (combination of R,G,B color elements) to reduce power consumption. Obviously, other combination of the color elements, such as combination of RG, RB, or GB, could have been used since it merely depends on the availability of the color elements and the user's preference. However, doing that would reduce power consumption in a lesser extent.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kent Chang whose telephone number is 571-272-7667. The examiner can normally be reached on Monday to Thursday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz, can be reached at 571-272-3638.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231


or faxed to:

571-273-8300

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Kent Chang
Primary Examiner
Art Unit 2629

kc

8/3/07